

*5. 5*

5. The method according to claim 4, wherein the interface assigned to the remote BLUETOOTH device comprises a UNIMODEM interface.

*6. 6*

6. The method according to claim 4, wherein the interface assigned to the remote BLUETOOTH device comprises a Telephony API.

*7. 7*

7. The method according to claim 4, wherein automatically assigning an interface to the remote BLUETOOTH device further comprises assigning a socket to the remote BLUETOOTH device for communications between the application and the remote BLUETOOTH device.

*8. 8*

8. The method according to claim 7, wherein the interface allows the application to treat the remote BLUETOOTH device as a standard network interface card.

*9. 9*

9. The method according to claim 4, wherein the remote BLUETOOTH device is a dial-up networking device associated with a second computer, the method further comprising using the interface assigned to the remote BLUETOOTH device to execute peer-to-peer communications between the first and second computers.

REMARKS

Each of claims 1-3 stands rejected under 35 U.S.C. § 102 or § 103. In particular, claim 3 has been rejected as anticipated by "Specification of the BLUETOOTH System Profiles

Version 1.0B" (hereinafter "Profiles"). Claim 1 is rejected in view of Profiles further in view of "Networking Over BLUETOOTH: Overview and Issues" by Bhagwat (hereinafter "Bhagwat"), and claim 2 stands rejected in view of Profiles further in view of "Specification of the BLUETOOTH System Core Version 1.0B" (hereinafter "Core"). Claim 1-3 have been clarified by amendment herein, and claims 4-9 have been added to more fully claim the invention of the present application. A marked copy of claims 1-3 is attached at Appendix A, while clean copies of all pending claims are supplied at Appendix B. The specification and Abstract have been amended to capitalize all references to the term BLUETOOTH as requested by the examiner, and the term BLUETOOTH is introduced at its first occurrence by the generic qualifier "wireless protocol."

With respect to the claims as amended herein, applicants submit that the cited art does not, singly or in combination teach the elements of the pending claims, and accordingly request reconsideration and withdrawal of the rejections and allowance of all pending claims. The claims will be addressed herein in the order in which the Office action addresses them for the sake of clarity. Thus, claim 3 will be first discussed, followed by a discussion of claims 1 and 2.

### **Claim 3**

Claim 3 pertains generally to automatic routing of BLUETOOTH connections to appropriate device types based on the type of the connecting device. For example, an originating device may be a dial-up networking device. Claim 3 is set forth below (as amended) with its elements bulleted for convenient reference during this discussion:

*A method of automatically routing an RFCOMM connection to an appropriate device type comprising the steps of:*

- *detecting a new device for connection;*
- *determining the type of the new device; and*
- *enumerating a physical device object associated with the new device if the new device is a dial-up networking device and exposing the device to an application by way of a transport driver interface if the device is not a dial-up networking device.*

The Office action rejects claim 3 as anticipated by Profiles. In particular, the Office states that Profiles generally discloses each claim element within the selection of pages 66-67, 70, 73, 76-77, 79, 174-75, 223, and 226-27.

Applicants have carefully reviewed the indicated pages and were unable to identify the recited claim elements therein. In particular, pages 66-67, 70, 73, 76-77, 79 pertain to the Service Discovery Application Profile, which is implemented by a “BLUETOOTH-aware, user-level application … for locating services.” There is no description in the Service Discovery Application Profile of a technique for automatically routing an RFCOMM connection to an appropriate device type, let alone of any of the recited elements. Indeed, it appears that the “BLUETOOTH-aware, user-level application … for locating services” is user-manipulated rather than automatic.

Furthermore, pages 174-75 discuss the Serial Port Profile. This profile description says nothing of automatically routing an RFCOMM connection to an appropriate device type, and in particular, does not describe any of the claim elements, including for example, the steps of determining a device type of a new device and either exposing the device via a physical device object in the case of DUN device or exposing the device via the transport driver interface (TDI) otherwise. Indeed, there appears to be no mention in these pages of the TDI or of dial-up networking, or of automatically selecting between such interfaces based on device type.

Finally, pages 223 and 226-27 relate to the BLUETOOTH Dial-up Networking Profile. While this section contains some of the relevant terms, such as “Dial-up Networking,” it does not describe the claimed invention with all its limitations. Again, no cited section, including this section, has described automatically routing an RFCOMM

connection to an appropriate device type in any manner, let alone by automatically determining the device type and then exposing the device via either a physical device object or via the transport driver interface (TDI) depending upon the determined type.

Because the cited reference, Profiles, does not describe each and every limitation of claim 3, whether dispersed or in the appropriate arrangement, it is respectfully submitted that claim 3 is patentable over the art. Accordingly, Applicants respectfully request that the rejection of this claim be reconsidered and withdrawn.

### **Claim 1**

Claim 1 is set forth below (as amended) with its elements bulleted for convenient reference:

*For use in a computer, a method of exposing a dial-up networking device to an application as a modem via RFCOMM, the method comprising the steps of:*

- *detecting a new connection to a remote device;*
- *determining whether the remote device is a dial-up networking device; and*
- *instantiating an intermediary between the application and RFCOMM if the remote device is a dial-up networking device, wherein the intermediary interfaces to the application as a modem interface but interfaces to lower levels as an RS-232 connection.*

Claim 1 pertains to a particular method for modem emulation on top of RFCOMM. Claim 1, prior to amendment, stood rejected as obvious in view of a combination of Profiles in view of Bhagwat. Although the Office action cites sections of both references said to pertain to elimination of serial port emulation, the claim has been clarified to make more apparent that it is not the abject elimination of serial port emulation that is claimed, but rather a unique method of working within the constraints of RFCOMM related to serial port emulation. Accordingly, it is respectfully submitted that the cited references do not, alone or in combination, describe or teach the elements of claim 1. Accordingly, it is respectfully requested that the rejection of claim 1 be reconsidered and withdrawn.

**Claim 2**

Claim 2 is set forth below (as amended) with its elements bulleted for convenient reference during this discussion:

*For use in a computer, a method of automatically exposing a remote device to an application through sockets via RFCOMM, the method comprising the steps of:*

- *detecting a new connection to the remote device;*
- *determining whether the remote device is a dial-up networking device; and*
- *if the remote device is not a dial-up networking device, allowing the application access to the remote device through an interface to a transport layer of the computer.*

Claim 2, prior to amendment, stood rejected as obvious in view of a combination of Profiles and Core. Although it is respectfully submitted that the cited combination did not teach the elements of the claim prior to the claim's clarification by amendment, it is submitted that claim 2 now even more clearly distinguishes over the cited combination. For example, neither Profiles nor Core teaches providing an application with an interface to the transport layer pursuant to a determination based on the device type of the remote device.

Accordingly, it is respectfully submitted that claim 2 is patentable over the prior art, and it is requested that the rejection of claim 2 be reconsidered and withdrawn.

In re Appln. of Giliberto et al.  
Serial No. 09/556,567

CONCLUSION

The application is considered in good and proper form for allowance, and the examiner is respectfully requested to pass this application to issue.

If, in the opinion of the examiner, a telephone conference would expedite the prosecution of the subject application, the examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: 1/13/2003

**APPENDIX A:**  
**Marked Copy of Claims 1-3 as Amended Herein**

1. (Once Amended) For use in a computer, a method of exposing a dial-up networking device to an application as a modem via RFCOMM, the method comprising the steps of:

detecting a new connection to a remote device;

determining whether the remote device is a dial-up networking device; and

instantiating an intermediary between the application and RFCOMM if the remote device is [the] a dial-up networking device, wherein the intermediary interfaces to the application as a modem interface but interfaces to lower levels as an RS-232 connection  
[enumerating a physical device object corresponding to the remote device; and

using the physical device object to communicate between a Bluetooth modem driver and RFCOMM without requiring the modem driver to specifically utilize an emulated COM port].

2. (Once Amended) For use in a computer, a method of automatically exposing a remote device to an application [as] through sockets via RFCOMM, the method comprising the steps of [;]:

detecting a new connection to the remote device;

determining whether the remote device is a dial-up networking device; and

if the remote device is not [the] a dial-up networking device, allowing the application access to the remote device through an interface to a transport layer of the computer [available to the application; wherein the access to the remote device is established by a RFCOMM channel number and remote device address pair].

3. (Once Amended) A method of automatically routing an RFCOMM connection to [a proper] an appropriate device type comprising the steps of:

detecting a new device for connection;

determining the type of the new device; and  
enumerating a physical device object associated with the new device if the new  
device is a dial-up networking device[;] and exposing the device to an application by way of  
a transport driver interface if the device is not a [DUN] dial-up networking device.